CLAIMS:

1. A tufted carpet comprising:

a primary backing with yarn comprised of at least 85% by weight of fibers selected from the group nylon fibers, wool fibers, and blends thereof, said tufted primary backing having a carpet side and an opposite back side,

a polymer adhesive applied to the back side of the tufted primary backing, said polymer adhesive contacting the primary backing and fibers of the yarn tufted in the primary backing, said polymer adhesive consisting of at least 85% by weight of one or more ethylene copolymers each comprised of 50 to 95 weight % of ethylene, and 5-50 weight % of at least one comonomer selected from the group of esters and carboxylic acids, said polymer adhesive having a melt index greater than 150 according to ASTM D-1238 @190 °C with a weight of 2.16 Kg, and a tenacity at room temperature of at least 5 Mpa according to test method DIN 53504-85, and

a secondary backing adhered to the back side of the primary backing.

2. The carpet of claim 1 wherein the comonomer group of esters and carboxylic acids consists of vinyl acetate, butyl acrylate, methyl acrylate, methacrylic acid, and acrylic acid.

3. The carpet of claim 2 wherein the polymer adhesive is a terpolymer containing 50-90 weight % ethylene, 5-20 weight % butyl acrylate, and 5-20 weight % methacrylic acid.

4. The carpet of claim 2 wherein at least 20 weight % of the polymer adhesive is a copolymer containing 50-95 weight % ethylene and 5-50 weight % metharcylic acid.

5. The carpet of claim 4 wherein at least 20 weight % of the polymer adhesive is a copolymer containing 50-95 weight % ethylene and 5-50 weight % vinyl acetate.

6. The carpet of claim 2 wherein the polymer adhesive has a melt index in the range of 200 to 800 according to ASTM D-1238 @190 °C with a weight of 2.16 Kg.

7. The carpet of claim 6 wherein the polymer adhesive has a melt index in the range of 400 to 600 according to ASTM D-1238 @190 °C with a weight of 2.16 Kg.

8. The carpet of claim 1 wherein the polymer adhesive has an adhesion to polyamide 6,6 of at least 2 Newtons per 10 mm according to test method Nylon Adhesion Test Method.

9. The carpet of claim 6 wherein the polymer adhesive has an adhesion to polyamide 6,6 of at least 5 Newtons per 10 mm according to test method Nylon Adhesion Test Method.

10. The carpet of claim 2 wherein the secondary backing is adhered directly to the back of the primary backing by said polymer adhesive, and wherein the secondary backing comprises a textile fabric comprised of at least 85% by weight of fibers comprised of polymers selected from the group of polyolefins, polyesters and polyamides.

11. The carpet of claim 10 further comprising a reinforcing grid between the back side of the primary backing and the secondary backing, said reinforcing grid being adhered directly to the back of the primary backing and to the secondary backing by said polymer adhesive.

12. The carpet of claim 11 wherein the reinforcing grid is an open fiberglass mat.

13. The carpet of claim 1 wherein the primary backing is comprised of a spunbonded polyolefin nonwoven.

14. The carpet of claim 1, wherein the tufted carpet has a fiber retention index of at least 3, measured according to the Lisson Tretrad test.

15. A process for preparation of a tufted polyamide-type fiber carpet comprising

providing a primary backing tufted with yarn comprised of at least 85% by weight of fibers selected from the group nylon fibers, wool fibers, and blends thereof, said tufted primary backing having a carpet side and an opposite back side,

providing a molten polymer adhesive on the back side of the tufted primary backing, said polymer adhesive consisting of at least 85% by weight of one or more ethylene copolymers each comprised of 50 to 95 weight % of ethylene, and 5-50 weight % of at least one comonomer selected from the group of esters and carboxylic acids, said polymer adhesive having a melt index greater than 150 according to ASTM D-1238 @190 °C with a weight of 2.16 Kg, and a tenacity of at least 5 Mpa according to test method DIN 53504-85,

introducing the tufted primary backing with the molten polymer adhesive into a nip and compressing molten polymer adhesive into said tufted primary backing in said nip, and

cooling said molten polymer adhesive to a temperature below the melting point of said molten adhesive.

16. The process of claim 15 wherein the polymer adhesive has an adhesion to polyamide 6,6 of at least 2 Newtons per 10 mm according to test method DIN 53504-85.

17. The process of claim 15 comprising the additional step of adhering a secondary backing to the back of the primary backing so as to form the tufted primary backing, the polymer adhesive and the secondary backing into an integral tufted carpet.

18. The process of claim 17 wherein the step of adhering the secondary backing to the back of the primary backing comprises

providing the secondary backing,

bringing the side of the secondary backing into contact with the back side of the tufted primary backing to which the molten polymer adhesive has been applied,

compressing said tufted primary backing, said molten polymer adhesive layer, and said secondary backing under a moving belt that applies a pressure of at least 1 N/cm^2 for a period of at least 10 seconds during which time the polymer adhesive remains in a molten state,

removing the moving belt from the tufted primary backing, molten polymer adhesive layer, and secondary backing, and then cooling said molten polymer adhesive to a temperature below the melting point of said molten adhesive so as to form the tufted primary backing the polymer adhesive and the secondary backing into an integral tufted carpet.

19. The process of claim 15 wherein the extrusion temperature of the molten polymer adhesive is in the range of 150 to 325 °C.

20. The process of claim 15 further comprising the step of introducing a reinforcing grid between the back side of the tufted primary backing and the secondary backing prior to the step of compressing said tufted primary backing, said molten polymer adhesive layer, and said secondary backing in said nip.

21. The process of claim 16 wherein the comonomer selected from the group of esters and carboxylic acids consists of vinyl acetate, butyl acrylate, methyl acrylate, methacrylic acid, and acrylic acid.

22. The process of claim 16 wherein the polymer adhesive is a terpolymer containing 50-90 weight % ethylene, 5-20 weight % butyl acrylate, and 5-20 weight % methacrylic acid.

23. The process of claim 16 wherein at least 20 weight % of the polymer adhesive is a copolymer containing 50-95 weight % ethylene and 5-50 weight % metharcylic acid.

24. The process of claim 23 wherein at least 20 weight % of the polymer adhesive is a copolymer containing 50-95 weight % ethylene and 5-50 weight % vinyl acetate.

25. The process of claim 16 wherein the polymer adhesive has a melt index in the range of 200 to 800 according to ASTM D-1238 @190 °C with a weight of 2.16 Kg.

26. The process of claim 25 wherein the polymer adhesive has a melt index in the range of 400 to 600 according to ASTM D-1238 @190 °C with a weight of 2.16 Kg.